NOAA CENTER of EXCELLENCE for GREAT LAKES and HUMAN HEALTH

What is it?

The Center of Excellence for Great Lakes and Human Health is a multi-disciplinary research center which will focus on understanding the inter-relationships between the Great Lakes ecosystem, water quality and human health. The Center will focus on using ecosystem forecasting to minimize risks to human health in coastal environments.

What will the Center do?

The overall purpose of the Center is to use a multi-disciplinary approach to make forecasts that reduce the risk to human health in the Great Lakes in three main areas:

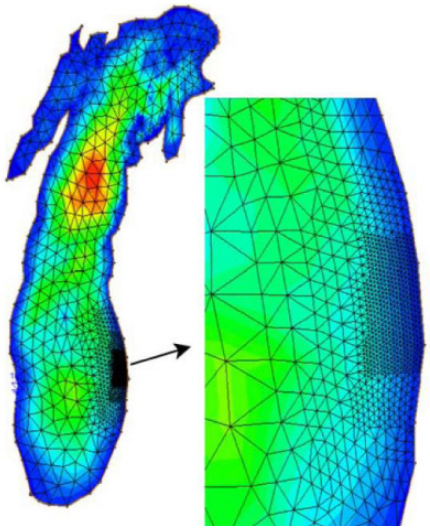
- Water Quality
- Beach Closures
- Harmful Algal Blooms

The Center will:

- Conduct research including laboratory work, field experimentation, and computer modeling.
- Apply new technologies and develop capabilities to provide public-domain forecasting methods.
- Develop a strong outreach and education program for public and user communities.
- Raise awareness of Great Lakes human health issues.

How was the Center started?

In 2004, the NOAA Office of Global Programs competitively funded the Center of Excellence for Great Lakes and Human Health at the Great Lakes Environmental Research Laboratory (GLERL) in Ann Arbor, MI. The Great Lakes Center is funded for five years and is one of three Centers in the United States (The two other Centers are located at the Northwest Fisheries Science Center in Seattle, WA and Hollings Marine Laboratory in Charleston, SC).



High-resolution detailed circulation models allow for forecasting of contaminant concentrations.

Why is this important?

The Great Lakes are the nation's single most important aquatic resource and can impact human health.

- Largest freshwater source in the world.
- 10% of the population in the U.S.
- Over 500 recreational beaches.
- 90% of U.S. surface water supply.
- Provide drinking water to 40 million U.S. and Canadian citizens.
- $4 billion commerical and sport fishing business.

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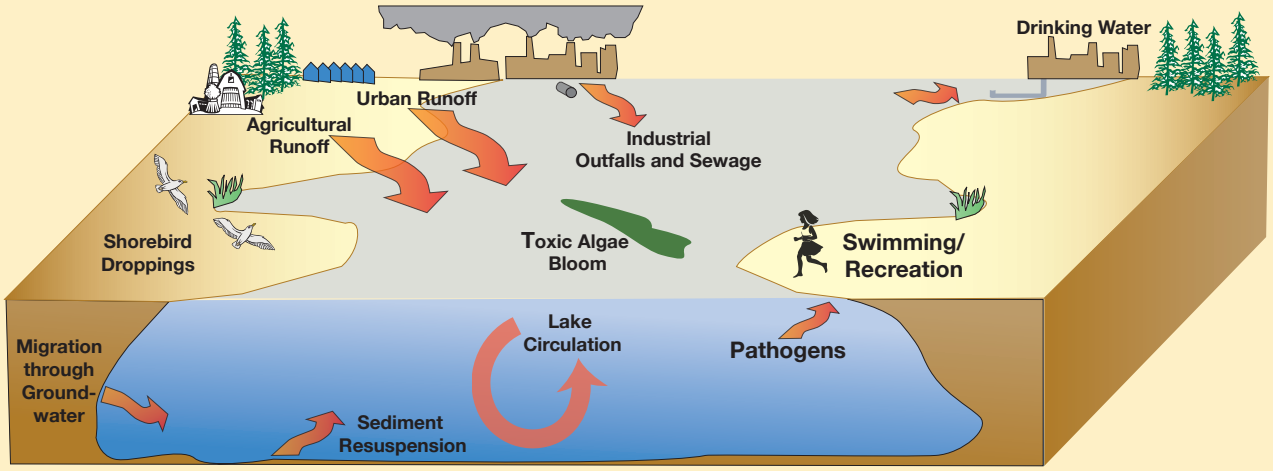

The ecosystem processes affecting water quality, beach closings, and harmful algal blooms are all similar. Land-use and meteorological processes and events in the watershed determine the sources and loadings of bacteria and nutrients to the lakes. These processes, particularly hydrodynamics, will determine the fate and probability of transport of this material to beaches, drinking water intakes, and regions of harmful algal bloom generation. Defining and forecasting these relationships will be the primary research focus of the Center.

Who will do this work?

There are twenty-four principal investigators and ten partner institutions within the Center, covering the fields of hydrodynamic modeling, water pollution microbiology, hydrology etc.

Leadership:

- Dr. Stephen Brandt, Director - GLERL - Director of the Center
- Dr. Joan Rose, Professor - Michigan State University
- Dr. David Schwab, Physical Oceanographer - GLERL

Partners:

- Michigan State University
- EPA Chicago
- EPA Athens
- U.S. Geological Survey
- Florida Institute of Oceanography
- NOAA NOS Beaufort Laboratory
- NOAA NOS Silver Spring Laboratory
- University of Michigan
- Michigan Sea Grant
- Great Lakes Human Health Network

Ecosystem Forecasting

Ecosystem forecasting predicts the effects of biological, chemical, physical, and human-induced changes on ecosystems and their components. It aids in:

- Improved decision making for coastal stewardship.
- More effective prioritization of sciences, across disciplines.
- Reductions in risks to human health.
- Mitigation of natural events and human activities.
- Enhanced communication between scientists and managers.

GLERL
Great Lakes Environmental Research Laboratory

Established in 1974 in Ann Arbor, Michigan, NOAA's Great Lakes Environmental Research Laboratory conducts high-quality research and provides scientific leadership on important issues in both Great Lakes and marine coastal environments leading to new knowledge, tools, approaches, awareness and services.

For more information on GLERL, please visit our homepage at:
http://www.glerl.noaa.gov

For further information or to order additional materials, visit our website or contact:

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